

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference

2005P00313WO

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2005/050952

International filing date (day/month/year)

03.03.2005

Priority date (day/month/year)

03.03.2004

International Patent Classification (IPC) or both national classification and IPC

G01D5/347, H02K33/10, F16F9/32

Applicant

BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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International application No.

PCT/EP2005/050952

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims		YES
	Claims	1, 2, 4	NO
Inventive step (IS)	Claims		YES
	Claims	1-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO

2. Citations and explanations:

Reference is made to the following documents:

- D1: US-A-4 463 300 (MAYNE ET AL.) 31 July 1984 (1984-07-31)
- D2: DE 195 34 758 A1 (YOKOGAWA ELECTRIC CORP., MUSASHINO, TOKYO, JP) 28 March 1996 (1996-03-28)
- D3: WO 95/01510 A (PARTEK CARGOTEC OY; SALMI, TEIJO; SIREN, STEN) 12 January 1995 (1995-01-12)

Independent claim 1

The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 is not novel within the meaning of PCT Article 33(2).

Document D1 discloses (the references between parentheses relate to said document) a reversing linear drive (see figure 2 and abstract) having at least one field winding (86, 88) to which a variable current is to be applied, having a magnetic armature (76) which is made to perform a linear movement, which oscillates in an axial direction with armature travel, by a magnetic field of the field winding, and having means (116) for detecting the armature position, which means have a striped element (124) which extends at least over the entire axial

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Box No. V

Reasoned statement under Rule 43bis 1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

armature travel and has an alternating arrangement of transparent and opaque stripes (126, 128), and at least one light barrier (122) with light-emitting and light-receiving parts whose light beams are oriented at least approximately perpendicular to the axial direction and the striped element (see figure 3).

Dependent claims

Dependent claims 2 to 13 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for novelty and inventive step:

with regard to the features of claims 2 to 11, reference is made to documents D1 to D3 and the corresponding passages of text cited in the search report. In the cited locations, said features are either known as normal possible configurations of an optical incremental sensor or they concern only minor structural modifications to an optical incremental sensor of the kind that a person skilled in the art routinely makes on the basis of familiar considerations, especially since the resulting advantages are readily foreseeable.

The provision of additional means for detecting the speed of the armature provided as per claim 12 is a procedure which is generally known to a person skilled in that art to ensure redundancy or to enable comparison measurements to be performed.

The use of the linear drive in conjunction with the pump piston of a compressor, as proposed in claim 13, is a well-known possible use of a reversible linear drive which is not based on an inventive step.